REMARKS

Claims 19-34 have been canceled, and claims 35-45 have been added. Applicant respectfully submits that the added claims contained herein are fully supported by the Specification as originally filed and do not include new matter.

Claim Rejections Under 35 U.S.C. § 103

Claims 19-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hawkins (U.S. Patent No. 4,532,530) in view of Kang et al. (U.S. Patent No.6,287,965). Claims 19-27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Figueredo et al. (U.S. Patent No. 5,883,650) in view of Lindfors et al. (U.S. Patent No.4,488,084) and further in view of Kang et al. (U.S. Patent No. 6,287,965). Claims 28-34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Stoffel (U.S. Patent No. 4,862,197) in view of Lindfors et al. (U.S. Patent No.4,488,084) and further in view of Kang et al. (U.S. Patent No. 6,287,965).

Claims 19-34 have been canceled, thereby mooting the rejections thereof.

Added Claims

Claims 35-45 have been added. Claim 35 includes forming a cavitation layer overlying a substrate in lateral contact with a first portion of a dielectric layer using atomic layer deposition, and forming a passivation layer on a second portion of the dielectric layer using atomic layer deposition, and not on the cavitation layer. Claim 39 includes forming a cavitation layer overlying a first dielectric layer and in lateral contact with a first portion of a second dielectric layer using atomic layer deposition, and forming a third dielectric layer on a second portion of the second dielectric layer using atomic layer deposition, and not on the cavitation layer. Hawkins does not include or suggest forming a passivation layer on a second portion of a dielectric layer using atomic layer deposition, where a first portion of the dielectic layer is in lateral contact with a cavitation layer, as recited in claim 35; or a third dielectric layer on a second portion of a second dielectric layer using atomic layer deposition, where a cavitation layer is in lateral contact with the second dielectric layer, as recited in claim 39. Kang et al. forms a layer 314 using an atomic layer deposition process in a trench and forms a dielectric film 318 on layer 314. This is different than claim 35 or 39 in that dielectric film 318 is formed on layer 314. Therefore, Hawkins in view of Kang et al. does not include or suggest each an every recitation of claims 35 and 39.

There is no indication in Figueredo et al. of forming a passivation layer on a second portion of a dielectric layer using atomic layer deposition, where a first portion of the dielectic layer is in lateral contact with a cavitation layer formed by atomic layer deposition, as recited in claim 35; or a third dielectric layer on a second portion of a second dielectric layer using atomic layer deposition, where a cavitation layer, formed by atomic layer deposition, is in lateral contact with the second dielectric layer, as recited in claim 39. Lindfors et al. indicates (column 2, lines 26-30 and Figure 1) that layers 2 3', 3, 3", and 4 can be formed using Atomic Layer Epitaxy, but none of the layers is in lateral contact with another. Moreover, paragraph [0010] of the present application specifically differentiates between Atomic Layer Epitaxy and the atomic layer deposition process used in claim35 or 39 and thus the present application teaches away from Atomic Layer Epitaxy. As indicated above, Kang et al. forms dielectric film 318 on a layer 314 formed by an atomic layer deposition. Therefore, Figueredo et al. in view of Lindfors et al. and further in view of Kang et al. do not include or suggest each and every recitation of claims 35 and 39.

Stoffel includes composite layer (24, 26) barrier material in lateral contact with a tantalum layer 32 (Figures 6 and 7) and a composite layer (24', 26') barrier material in lateral contact with a tantalum layer 32' (Figure 8 and column 4, line 65), but the tantalum layer is not a dielectric layer, as recited in claim 35 or 39. Therefore, Stoffel fails to overcome the deficiencies of Lindfors et al. and Kang et al. with respect to claims 35 and 39. Therefore, in view of the foregoing, claims 35 and 39 should be allowed.

Claims 36-38 depend from claim 35 and thus are allowable for at least the same reasons as claim 35. Claims 40-45 depend from claim 39 and thus are allowable for at least the same reasons as claim 39. Therefore, claims 36-38 and claims 40-45 should be allowed.

Applicant respectfully requests admittance and allowance of claims 35-46.

CONCLUSION

In view of the above remarks, Applicant believes that the claims are in condition for allowance and respectfully requests a Notice of Allowance be issued in this case. If the Examiner has any questions regarding this application, please contact the undersigned at (612) 312-2208.

Respectfully submitted,

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Tod A. Myrum
Reg. No. 42,922

Attorneys for Applicant
HEWLETT PACKARD COMPANY
3404 E. Harmony Rd.
Intellectual Property Administration
Fort Collins, CO 80527-2400